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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/075,310 | 02/14/2002 | Joerg Habetha | DE 010045 | 8938 |

24737 7590 10/18/2006

PHILIPS INTELLECTUAL PROPERTY & STANDARDS
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| EXAMINER | |
|---|---|
| MERED, HABTE | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2616 | |

DATE MAILED: 10/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

10

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/075,310 | HABETHA, JOERG | |
| | Examiner | Art Unit | |
| | Habte Mered | 2616 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on 7/28/2006.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) 1-19 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-19 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 14 February 2002 is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date ____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

1. The amendment filed on 07/28/2006 has been entered and fully considered.

2. Claims 1-19 are pending.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. **Claims 1-19** are rejected under 35 U.S.C. 103(a) as being unpatentable over Markwalter et al (US 6, 671, 284), hereinafter referred to as Markwalter, in view of Malek et al (US 5, 666, 366), hereinafter referred to as Malek.

*Markwalter discloses a self-configuring source-aware bridging for noisy media.*

5. Regarding **claim 1**, Markwalter discloses a network comprising a plurality of subnetworks which can each be connected via bridge terminals **(Figure 32 and Column 35, Lines 5-45)** and each include a controller **(Figure 2, element 76)** for controlling a sub-network **(Column 9, Lines 5-15)**.

6. Regarding **claim 7**, Markwalter teaches a controller **(Figure 2, element 76)** in a subnetwork which can be connected to other subnetworks of a network via bridge terminals, the controller being provided - for controlling a subnetwork **(Column 9, Lines 5-15).**

7. Regarding **claims 8 and 10**, Markwalter teaches a network, comprising:

a first centralized sub-network comprising a plurality of first terminals (**Fig. 32 elements 632a and 632b**), each first terminal having an associated first controller, wherein one of the first controllers is a first central controller responsible for forming associated first medium access control (MAC) frames according to a first MAC frame structure for transmission in the first subnetwork **(Figure 32, elements 648a and 648c)**, and wherein one of the first terminals is a first bridge **(Figure 32, element 644)** terminal for communication of the first MAC frames to another subnetwork; **(See also Column 35, Lines 5-40)** and

a second centralized sub-network comprising a plurality of second terminals **(Figure 32, elements 640a and 640b)** each second terminal having an associated second controller, wherein one of the second controllers is a second central controller responsible for forming associated second MAC frames **(See Figure 2)** according to a second MAC frame structure for transmission in the second subnetwork, and wherein one of the second terminals is a second bridge **(Figure 32, element 646)** terminal for communication of the second MAC frames to another sub-network.

8. Regarding **claim 17**, Markwalter discloses a network, further comprising: a third centralized sub-network comprising a plurality of third terminals **(Figure 32, elements 636a and 636b)**, each third terminal having an associated third controller **(Column 8, Lines 29-31)**, wherein one of the third controllers is a central third controller responsible for forming associated third MAC frames **(See Figure 2)** according to a third MAC frame structure for transmission in the third sub-network, and wherein one of the third terminals is a third bridge terminal **(Figure 32, element 646)** for communication of the third MAC frames to another sub-network.

9. With respect to **claims 1, 7, 8, 10, and 17**, Markwalter fails to disclose shifting the frame structure of its subnetwork to at least a frame structure of another sub-network.

*Malek discloses frame-formatting technique for the purpose synchronizing frames on an inter-Base Station basis in a TDMA communication system.*

Malek teaches shifting the frame structure of its sub-network **(i.e. any slave base station)** to at least a frame structure of another sub-network **(i.e. master base station)**. **(See Column 7, Lines 19-32 and Figure 5)**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Markwalter's apparatus to incorporate frame synchronization by shifting the frame structure of its sub-network to at least a frame structure of another sub-network. The motivation being using frame synchronization by shifting the frame decreases collision and interference and maximizes the use of the frequency spectrum as illustrated in Malek's Column 3, Line 6.

10. Regarding **claim 9**, Markwalter teaches all aspects of the claimed invention as set forth in the rejection of claim 8, including a first controller, but fails to disclose displacing the first frame structure to the second frame structure by shifting the first frame structure to minimize a waiting time between the first frame structure and the second frame structure.

Malek discloses displacing the first frame structure to the second frame structure by shifting the first frame structure to minimize a waiting time between the first frame structure and the second frame structure. **(See Column 7, Lines 19-32 and Figure 5)**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Markwalter's apparatus to incorporate frame synchronization by displacing the first frame structure to the second frame structure by shifting the first frame structure to minimize a waiting time between the first frame structure and the second frame structure. The motivation being using frame synchronization by shifting the frame decreases collision and interference and maximizes the use of the frequency spectrum as illustrated in Malek's Column 3, Line 6.

11. Regarding **claims 2-4 and 11-13**, Markwalter teaches all aspects of the claimed invention as set forth in the rejection of claims 1 and 10, but fails to disclose a network with frame synchronization strategy, characterized in that a controller is provided for lengthening or shortening frames or for inserting an unused phase between successive frames up to a prescribed frame difference relative to the frame structure of the other subnetwork.

Malek teaches a network, characterized in that a controller is provided for lengthening or shortening frames **(See Figure 6, last two steps)** or for inserting an unused phase between successive frames up to a prescribed frame difference relative to the frame structure of the other subnetwork. **(See Column 7, Lines 19-40 and Column 8, Lines 17-35. See also Figures 6 and 7)**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Markwalter's apparatus to incorporate frame synchronization by shifting the frame wherein the frame shifting is achieved either by lengthening or shortening the frame size. The motivation being using frame

synchronization by shifting the frame decreases collision and interference and maximizes the use of the frequency spectrum as illustrated in Malek's Column 3, Line 6.

12. Regarding **claim 5**, Markwalter teaches all aspects of the claimed invention as set forth in the rejection of claim 1 but fails to disclose a network, characterized in that a controller of a sub-network is provided for communicating with at least another controller of another sub-network regarding the type of shift.

Malek discloses a network, characterized in that a controller of a sub-network is provided for communicating with at least another controller of another sub-network regarding the type of shift. **(See Column 7, Lines 42-45)**

13. Regarding **claim 6**, Markwalter teaches all aspects of the claimed invention as set forth in the rejection of claim 1 but fails to disclose discloses a network characterized in that a bridge terminal is provided for instructing the controllers of the sub-networks connecting them as to which controller is to carry out a shift and in which direction.

Malek discloses a network characterized in that a bridge terminal is provided for instructing the controllers of the sub-networks connecting them as to which controller is to carry out a shift and in which direction. **(See Column 7, Lines 42-45)**

14. With respect to **claims 5 and 6**, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Markwalter's apparatus to incorporate an indication as to which controller is to carry out a shift and in which direction. The motivation being using frame synchronization where the master base station indicates to the slave base stations to perform a shift in a given direction

helps in minimizing collision and interference and maximizes the use of the frequency spectrum as illustrated in Malek's Column 3, Line 6.

15. Regarding **claim 14**, Markwalter discloses a network, wherein the central first controller returns the duration of the first MAC frames to Tn after the synchronization. **(See Column 42, Lines 35-47 and Figure 39)**

16. Regarding **claim 15**, Markwalter discloses the network, wherein the first bridge terminal is the second bridge terminal. **(See Figure 32, element 628 and 630)**

17. Regarding **claim 16**, Markwalter discloses a network, wherein the central first controller is a first bridge controller of the first bridge terminal. **(See Figure 32, element 628 and 630)**

18. Regarding **claim 18**, Markwalter discloses a network, wherein the first bridge terminal is the third bridge terminal. **(See Figure 32, element 628 and 630)**

19. Regarding **claim 19,** Markwalter discloses a network, wherein the first bridge terminal is the second bridge terminal. **(See Figure 32, element 628 and 630)**

***Response to Arguments***

20. Applicant's arguments filed 07/28/2006 have been fully considered but they are not persuasive.

21. In the Remarks, on Page 8, in the last paragraph, Applicant argues that independent claims 1, 7, and 10 call for communication between sub-networks and the communication cited by the Examiner between the master base station and the slave base station in Malek's system constitutes communication in a single network. Examiner respectfully disagrees with Applicant's conclusion.

By definition a sub-network is a collection of OSI end systems and intermediate systems under the control of a single network access protocol. (Please refer to Newton's Telecom Dictionary, 16th Edition, on Page 809) Given such a definition and recalling that each base station has mobile terminals in its network where the mobile terminals can be considered as end systems and the single network access protocol is TDMA and the base station providing a single network access. Hence clearly based on the definition provided each base station along with the mobile stations registered with the base station constitutes a sub-network. Further, based on such a definition the communication between the master base station and the slave station is a communication between sub-networks.

***Conclusion***

22. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Habte Mered whose telephone number is 571 272 6046. The examiner can normally be reached on Monday to Friday 9:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 571 272 3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HM
10-15-2006

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